CHAPTEB II

STRUCTURE AND PRESENT DISTRIBUTION OF THE MAMMALIA

External Form.—It would be quite impossible for any one to confuse any other quadrupedal animal with a mammal. The body of a reptile is, as it were, slung between its limbs, like the body of an eighteenth century chariot between its four wheels; in the mammal the body is raised entirely above, and is supported by, the four limbs. The axes of these limbs too, as a general rule, are parallel with the vertical axis of the body of their possessor. There is thus a greater perfection of the relations of the limbs to the trunk from the point of view of a terrestrial creature, which has to use those limbs for rapid move-ment. The same perfection in these relations is to be seen, it should be observed, in such running forms among the lower Vertebrata as the Birds and the Dinosaurs, where the actual angulation of the limbs is as in the purely running Mam-malia. These relations are of course absolutely lost in the aquatic Cetaeea, and not marked in various burrowing creatures. The way in which the fore- and hind-limbs are angulated is considerably different in the two cases. In the latter, which are most used and, as it were, push on the anterior part of the body, the femur lias its lower end directed forwards, the tibia and the fibula project backwards at the lower end, while the ankle and foot are again inclined in the same direction as the femur. With the fore - limbs there is not this regular alternation. The humerus is directed backwards, the fore-arm forwards, and the hand still more forwards. This angulation seems to facilitate movement, inasmuch as it is seen

in even the Amphibia and the lower Eeptilen, in which, however, the differences between the fore- and hind-limbs are less marked, indicat-